2.2 Worksheet #2 - More Power Rule Practice

Compute the derivatives of the following functions.

(1) $f(x) = x^2 - 2$

(2) $f(x) = x - x^3$

(3) $f(x) = x^2 + 3x - 6$

(4) $f(x) = 2x^2 - 4$

(5) $f(x) = \frac{2}{x}$

(6) $f(x) = \frac{4}{x^2} - \frac{x^2}{4}$

(7) $f(x) = 2x^{10} - 4x^2$

(8) $f(x) = 3\sqrt{x}$

(9) $f(x) = x\sqrt{3}$

(10) $f(x) = \frac{x^4}{4} + x - 2$

(11) $f(x) = x(x + 1)$

(12) $f(x) = x^2 - e^2$

(13) $f(x) = 5x^3 - \frac{5}{x^3}$

(14) $f(x) = (6x + 5) - (3x + x^2)$

(15) $f(x) = 2x^2 - 5x + 10$

(16) $f(x) = x - \frac{1}{x}$

(17) $f(x) = 4x^{\frac{5}{2}}$

(18) $f(x) = 1 - 5$

(19) $f(x) = \frac{1}{3x}$

(20) $f(x) = \frac{x^2}{2} - 3x$

(21) $f(x) = 5^2$

(22) $f(x) = (x^2 + 1)^2$

(23) $f(x) = x^{1000}$

(24) $f(x) = \frac{1}{x^{1000}}$

(25) $f(x) = \frac{x^2}{\ln(2)}$

(26) $f(x) = \sqrt{3x}$

(27) $f(x) = \sqrt{7}$

(28) $f(x) = \frac{x^2-1}{x}$

(29) $f(x) = \frac{8}{\sqrt{x}} - 3x$

(30) $f(x) = \frac{7x+3x^2}{5\sqrt{x}}$